claims pto

l.ellis

5/13/06

1.   (currently amended) An electronic commerce system, which comprises:

a plurality of customer facing utility systems, each of said customer facing utility systems being coupled to a customer facing communication network, wherein a plurality of customer systems area coupled to the customer facing communication network, and wherein the customer facing utility systems are also coupled with a firm side communication network ~~adapted to communicate with customer systems, each of said customer facing utility systems having associated therewith authoritative data that is writable to by said customer facing utility system and read-only data;~~

a plurality of street side utility systems which operate to communicate with financial exchanges to execute customer orders, wherein the street side utility systems are coupled with the firm side communication network;

a firm side utility system which operates to settle orders and update account balances, wherein the firm side utility system is coupled to the firm side communication network, and wherein the firm side communication network operates to provide for asynchronous communication between the firm side utility system, the street side utility system, and the customer facing utility systems;

a plurality of sets of customer facing data, wherein each set of customer facing data has a corresponding customer facing utility system;

wherein each set of customer facing data includes a first type of data which can be written to by its corresponding customer facing utility system, and a second type of data which is provided by the firm side system, and the second type of data cannot be written to by the corresponding customer facing utility system, and a third type of data which is provided by the street side utility systems, and third type of data cannot be written to by the corresponding customer facing utility system; and,

means for replicating a data record of the first type of data when a customer facing utility system writes the data record of the first type of data to its corresponding data set of customer facing data, such that each set of customer facing data includes the

data record ~~written-to-said-authoritative-data-of-any-one-of-said-customer-facing-utility~~ ~~systems-to-the-authoritative-data-of-each-of-the-other-customer-facing-utility-systems.~~

2.   (currently amended) The system as claimed in claim 1, including:
        wherein the [[a]] firm side utility system has a corresponding set of firm data which includes a first type of data which is provided by the customer facing utility systems and the first type of data cannot be written to by the firm utility system, and a second type of data which can be written to by the firm utility system, and a third type of data which is provided by the street side utility systems, and the third type of data cannot be written to by the firm utility ~~said-firm-side-system-having-associated-therewith~~ ~~authoritative-data-that-is-writable-to-by-said-firm-side-system-and-read-only-data~~;
        means for replicating firm data of the second type of data and providing it to each set of customer facing data ~~written-to-said-authoritative-data-of-said-firm-side-systems-to~~ ~~the-read-only-data-of-each-of-said-customer-facing-utility-systems.~~

3.   (currently amended) The system as claimed in claim 2, including:
        means for replicating the data record of the first type of data of the customer facing data when a customer facing utility system writes the data record to the customer facing data, in the ~~written-to-said-authoritative-data-of-any-one-of-said-customer-facing~~ ~~utility-systems-to-the-read-only-data-of~~ firm side data, such that the firm side utility has access to the data record ~~system.~~

4.   (currently amended) The system as claimed in claim 1, including:
        a plurality of sets of street side facing data, wherein each set of street side facing data has a corresponding street side utility system ~~systems,-each-of-said-street-side~~ ~~systems-being-adapted-to-communicate-with-street-systems,-each-of-said-street-side~~ ~~systems-having-associated-therewith-authoritative-data-that-is-writable-to-by-said-street~~ ~~side-system-and-read-only-data~~; and,
        wherein each set of street side facing data includes a first type of data which is provided by the customer facing utility systems, and the first type of data cannot be written to the by the corresponding street side system, and a second type of data which is

provided by the firm side utility system, and the second type of data cannot be written to by the corresponding street side utility system, and a third type of data which can be written to by its corresponding street side utility system; and,

means for replicating a street side data record of the third type of data when a street side utility writes the street side data record to its corresponding data set of street side facing data, such that each set of street side facing data includes the street side data record ~~data written to said authoritative data of any one of said street side systems to the authoritative data of each of the other street-side-systems~~.

5.   (currently amended) The system as claimed in claim 4, including:

wherein the [[a]] firm side utility system has a corresponding set of firm data which includes a first type of data which is provided by the customer facing utility systems and the first type of data cannot be written to by the firm utility system, and a second type of data which can be written to by the firm utility system, and a third type of data which is provided by the street side utility systems, and the third type of data cannot be written to by the firm utility[[,]] ~~said firm side system having associated therewith authoritative data that is writable to by said firm side system and read-only data~~;

means for replicating firm data of the second type of data and providing it to each set of street side data ~~written to said authoritative data of said firm-side systems to the read-only data of each of said street-side systems~~.

6.   (currently amended) The system as claimed in claim 5, including:

means for replicating street side facing data of the third type and providing it to the set of firm data ~~written to said authoritative data of any one of said street side systems to the read-only data of said firm-side system~~.

7.   (currently amended) The system as claimed in claim 5, including:

means for replicating street side facing data of the third type and providing it to each of the sets of ~~written to said authoritative data of any one of said street-side systems to the read-only data of each of said~~ customer facing data ~~utility systems~~.

8. (Previously presented) An electronic commerce system, which comprises:

a plurality of customer facing utility systems, each of said customer facing utility systems being adapted to communicate with customer systems, each of said customer facing utility systems including means for processing customer orders received from customer systems and means for processing customer inquiries received from customer systems, and each of said customer facing utility systems having associated therewith authoritative data that is writable to by said customer facing utility system and read-only data; and,

means for replicating data records written to said authoritative data of any one of said customer facing utility systems to the authoritative data of each of the other customer facing utility systems.

9. (Previously presented) The system as claimed in claim 8, including:

a firm side system, said firm side system having associated therewith authoritative data that is writable to by said firm side system and read-only data;

means for replicating data written to said authoritative data of said firm side systems to the read-only data of each of said customer facing utility systems.

10. (Previously presented) The system as claimed in claim 9, including:

means for replicating data records written to said authoritative data of any one of said customer facing utility systems to the read-only data of firm side system.

11. (Previously presented) The system as claimed in claim 8, including:

a plurality of street side systems, each of said street side systems being adapted to communicate with street systems, each of said street side systems including means for executing orders communicated from a customer facing utility system, and each of said street side systems having associated therewith authoritative data that is writable to by said street side system and read-only data; and,

means for replicating data records written to said authoritative data of any one of said street side systems to the authoritative data of each of the other street side systems.

12. (Original) The system as claimed in claim 11, including:

a firm side system, said firm side system having associated therewith authoritative data that is writable to by said firm side system and read-only data;

means for replicating data written to said authoritative data of said firm side systems to the read-only data of each of said street side systems.

13. (Original) The system as claimed in claim 12, including:

means for replicating data records written to said authoritative data of any one of said street side systems to the read-only data of said firm side system.

14. (Previously presented) The system as claimed in claim 12, including:

means for replicating data records written to said authoritative data of any one of said street side systems to the read-only data of each of said customer facing utility systems.

15. (Previously presented) The system as claimed in claim 14, wherein said means for processing customer orders includes:

means for creating a transaction record for said order; and,

means for writing said transaction record to the authoritative data associated with said customer facing utility system.

16. (Original) The system as claimed in claim 14, wherein said means for responding to customer inquiries includes:

      means for aggregating transaction records in said authoritative data to determine status of a transaction.

17. (Previously presented) An electronic commerce system, which comprises:

      a plurality of customer facing utility systems, each of said customer facing utility systems being adapted to communicate with customer systems, each of said customer facing utility systems including means for processing customer orders received from customer systems and means for processing customer inquiries received from customer systems, and each of said customer facing utility systems having associated therewith authoritative data that is writable to by said customer facing utility system and read-only data;

      a plurality of street side systems, each of said street side systems being adapted to communicate with street systems, each of said street side systems including means for executing orders communicated from a customer facing utility system, and each of said street side systems having associated therewith authoritative data that is writable to by said street side system and read-only data; and,

      means for replicating data records written to said authoritative data of any one of said street side systems to the authoritative data of each of the other street side systems; and,

      means for replicating data records written to said authoritative data of any one of said customer facing utility systems to the authoritative data of each of the other customer facing utility systems.

18. (Previously presented) The system as claimed in claim 17, including:

      a firm side system, said firm side system having associated therewith authoritative data that is writable to by said firm side system and read-only data;

      means for replicating data written to said authoritative data of said firm side system to the read-only data of said customer facing utility system and said street side system;

      means for replicating data records written to said authoritative data of said customer facing utility systems to said read-only data of said firm side system; and,

means for replicating data records written to said authoritative data of said street side system to said read-only data of said firm side system.

19. (Previously presented) The system as claimed in claim 17, wherein said means for processing customer orders includes:

means for creating a transaction record for said order; and,

means for writing said transaction record to the authoritative data associated with said customer facing utility system.

20. (Previously presented) The system as claimed in claim 17, wherein said means for responding to customer inquires includes:

means for aggregating transaction records in said authoritative data associated with said customer facing utility system to determine status of a transaction.

21. (currently amended) A method of processing customer transactions, which comprises the steps of:

providing a plurality of customer facing utility systems which are configured to receive customer transaction requests, wherein the customer transaction requests include customer orders to buy or sell securities;

providing a plurality of street side utility systems which operate to communicate with financial exchanges to execute customer orders;

providing a firm side utility system which operates to settle orders and update account balances;

providing a plurality of sets of customer facing data, wherein each set of customer facing data has a corresponding customer facing utility system;

wherein each set of customer facing data includes a first type of data which can be written to by its corresponding customer facing utility system, and a second type of data which is provided by the firm side system, and the second type of data cannot be written to by the corresponding customer facing utility system, and a third type of data which is provided by the street side utility systems, and the third type of data cannot be written to by the corresponding customer facing utility system;

providing a set of firm data which includes a first type of data which is provided by the customer facing utility systems and the first type of data cannot be written to by the firm utility system, and a second type of data which can be written to by the firm utility system, and a third type of data which is provided by the street side utility systems, and the third type of data cannot be written to by the firm utility;

providing a plurality of sets of street side facing data, wherein each set of street side facing data has a corresponding street side utility system;

wherein each set of street side facing data includes a ~~first type of data which is provided by the customer facing utility systems, and the first type of data cannot be written to by the corresponding street side system, and a second~~ first type of data which is provided by the firm side utility system, and the ~~second~~ first type of data cannot be written to by the corresponding street side utility system, and a ~~third~~ second type of data which can be written to by its corresponding street side utility system;

receiving a customer transaction request at a first customer facing utility system of a plurality of customer facing utility systems;

creating a <u>transaction</u> record of said transaction request;

writing said transaction ~~request~~ record to a first set of customer facing data of the plurality of sets of customer facing data sets, wherein the transaction <u>record</u> ~~request~~ is of the first type of data <u>of the first set of customer facing data</u>;

replicating said transaction ~~request~~ record to each of the plurality sets of customer facing data;

~~sending said transaction request from said first customer facing utility system to a first street side utility system of the plurality of street side utility systems;~~

executing said transaction request at ~~the~~ a first street side utility system;

creating a record of said transaction execution;

writing said transaction execution record to a first set of street side facing data which corresponds to the fist street side utility system, wherein the record of said transaction is of the ~~third~~ <u>second</u> type of data <u>of the first set of street side facing data</u>; and,

replicating said transaction execution record to each of the plurality of sets of customer facing data, <u>such that said transaction execution record is replicated in the third type of data for each of the plurality of sets of customer facing data.</u>

wherein each set of street side facing data includes a ~~first-type-of-data-which-is provided-by-the-customer-facing-utility-systems, and-the-first-type-of-data-cannot-be written-to-by-the-corresponding-street-side-system, and-a-second-~~ first type of data which is provided by the firm side utility system, and the ~~second-~~ first type of data cannot be written to by the corresponding street side utility system, and a ~~third-~~ second type of data which can be written to by its corresponding street side utility system;

receiving a customer transaction request at a first customer facing utility system of a plurality of customer facing utility systems;

creating a transaction record of said transaction request;

writing said transaction ~~request~~ record to a first set of customer facing data of the plurality of sets of customer facing data sets, wherein the transaction record ~~request~~ is of the first type of data of the first set of customer facing data;

replicating said transaction ~~request~~ record to each of the plurality sets of customer facing data;

~~sending-said-transaction-request-from-said-first-customer-facing-utility system-to-a-first-street-side-utility-system-of-the-plurality-of-street-side-utility systems;~~

executing said transaction request at ~~the-~~ a first street side utility system;

creating a record of said transaction execution;

writing said transaction execution record to a first set of street side facing data which corresponds to the fist street side utility system, wherein the record of said transaction is of the ~~third-~~ second type of data of the first set of street side facing data; and,

replicating said transaction execution record to each of the plurality of sets of customer facing data, such that said transaction execution record is replicated in the third type of data for each of the plurality of sets of customer facing data.

22. The method as claimed in claim 21, including the
step of:
 sending said transaction request from said one
customer facing system to one of a plurality of street
5 side systems;
 executing said transaction request at said one
street side system;
 creating a record of said transaction execution;
 writing said transaction execution record to data
10 storage associated with said one street side system;
and,
 replicating said transaction execution record to
data storage associated with each of said customer
~~facing systems~~.

23. (previously presented) The method as claimed in claim 21, wherein said
transaction request is a buy order.

24. (previously presented) The method as claimed in claim 21, wherein said
transaction request is a sell order.

25. . (previously presented) The method as claimed in claim 21, wherein said
transaction request is a cancel order.

26. (previously presented) The method as claimed in claim 21, wherein said
transaction execution includes the step of filling an order.

27. (currently amended) The method as claimed in claim 21, including the steps of:
 receiving a customer transaction inquiry at one of said customer facing utility
systems;
 determining status of a transaction based upon transaction records in the set
customer facing data ~~storage associated~~ corresponding with said one customer facing
utility system.

28. (Previously presented) The system as claimed in claim 1, wherein each of said customer facing utility systems is adapted to receive asynchronous communications from said customer systems.

29. (Previously presented) The system as claimed in claim 1, including means for routing communication between one of said customer systems and one of said customer facing utility systems.

30. (Previously presented) The system as claimed in claim 1, including means for connecting

31. (Previously presented) The system as claimed in claim 30, wherein said means for connecting said customer facing utility systems to a network of customer systems includes a gateway.

32. (Previously presented) The system as claimed in claim 8, wherein each of said customer facing utility systems is adapted to receive asynchronous communications from said customer systems.

33. (Previously presented) The system as claimed in claim 8, including means for routing communication between one of said customer systems and one of said customer facing utility systems.

34. (Previously presented) The system as claimed in claim 8, including means for connecting said customer facing utility systems to a network of customer systems.

35. (Previously presented) The system as claimed in claim 34, wherein said means for connecting said customer facing utility systems to a network of customer systems includes a gateway.

36. (Previously presented) The system as claimed in claim 16, wherein said means for aggregating transaction records includes logic for determining a best estimate of said status of said transaction.

37. (Previously presented) The system as claimed in claim 36, wherein said logic includes means for resolving inconsistencies between transaction records.

38. (Previously presented) The system as claimed in claim 17, wherein each of said customer facing utility systems is adapted to receive asynchronous communications from said customer systems.

39. (Previously presented) The system as claimed in claim 17, including means for routing communication between one of said customer systems and one of said customer facing utility systems.

40. (Previously presented) The system as claimed in claim 17, including means for connecting said customer facing utility systems to a network of customer systems.

41. (Previously presented) The system as claimed in claim 40, wherein said means for connecting said customer facing utility systems to a network of customer systems includes a gateway.

42. (Previously presented) The system as claimed in claim 20, wherein said means for aggregating transaction records includes logic for determining a best estimate of said status of said transaction.

43. (Previously presented) The system as claimed in claim 42, wherein said logic includes means for resolving inconsistencies between said transaction records.

44. (Previously presented) The method as claimed in claim 21, including resolving inconsistencies between transaction request records and transaction execution records replicated to said data storage associated with said customer facing utility systems.